

AMENDMENTS TO THE DRAWINGS

Please replace the drawings presently on file with the drawings submitted herewith.

Attachment: Replacement Drawing Sheets 1 to 50.

REMARKS

Claims 32 to 36 and 39 to 40 are pending in the application.

With respect to the objection to the Specification for the reasons indicated in point 3.1 of the Office Action, reconsideration is respectfully requested on the following grounds.

The abbreviation "MDB" has been expanded to "methylated DNA binding" and the abbreviation "MeCP2" has been expanded to "methyl CpG binding protein 2".

The amendments to the specification, as discussed above, are believed to overcome the Examiner's objections to the specification.

With respect to the objection to the drawings for the reasons indicated on the form PTO 948, which accompanied the present Office Action, reconsideration is respectfully requested on the following grounds.

Replacement drawings believed to overcome the objections noted by the draftsman have been submitted herewith.

With respect to the rejection to claim 38 under 35 U.S.C. § 101 for being inoperative and lacking utility, reconsideration by the Examiner is respectfully requested on the following grounds.

Claim 38 has been cancelled.

Claim 38 being cancelled is believed to overcome the Examiner's rejection to claim 38 under 35 U.S.C. § 101 for being inoperative and lacking utility.

With respect to the rejection to claims 32 to 38 under 35 U.S.C. § 112, second paragraph for being indefinite, reconsideration by the Examiner is respectfully requested on the following grounds.

Claim 32 has been amended to be directed to a method of inhibition of tumorigenesis and for altering a methylation pattern in a patient DNA. Support for this amendment can be found on page 10, lines 19-23, Fig. 14C, Fig. 15 and page 32, line 26 to page 33, line 5 of the specification.

The amendment to claim 32 is believed to render the Examiner's objection to the phrase "restoring an aberrant methylation pattern" moot.

Claim 35 has been amended to replace the phrase "small molecule" with the phrase "imidazole or a derivative thereof". Support for this amendment can be found on page 7, lines 35-36 and page 10, line 25 of the specification.

Claim 36 has been amended to correct the phrase "one of claims" with the word "claim", as was originally intended.

Claims 37 and 38 have been cancelled.

The amendments to claims 32, 35 and 36, as discussed above, and claims 37 and 38 being cancelled, are believed to overcome the Examiner's rejection to claims 32-38 under 35 U.S.C. § 112, second paragraph. Claim 33, dependent on claim 32, and claim 34, dependent on claim 33, are therefore also believed to overcome the Examiner's rejection.

With respect to the rejection to claims 32 to 38 under 35 U.S.C. § 112, first paragraph for failing to comply with the written description requirement, reconsideration by the Examiner is respectfully requested on the following grounds.

As discussed above, claim 32 has been amended to be directed to a method of inhibition of tumorigenesis and for altering a methylation pattern in a patient DNA. Support for this amendment can be found on page 10, lines 19-23, Fig. 14C, Fig. 15 and page 32, line 26 to page 33, line 5 of the specification. The Applicants submit, therefore, that they were in possession of the claimed invention at the time the application was filed.

With respect to the Examiner's allegation that the terms antagonist or inhibitor of DNA demethylase cover too broad a scope when compared to the teachings of the specification, reconsideration by the Examiner is respectfully requested on the following grounds.

As specifically noted by the Examiner, the specification teaches a variety of different antagonists or inhibitors: oligonucleotides consisting of 4 units of C^mG, anti-DNA demethylase antibody, antisense oligonucleotide of DNA demethylase and chemicals such as imidazole. Such variety of different compounds, taught as antagonists and inhibitors in the specification, teach that antagonists and inhibitors of DNA demethylase can cover a large range of different structures and fields of compounds. Thus, it would be unfair to the Applicant to limit the claim with more non-generic terminology.

With respect to the Examiner's comment that the antisense oligonucleotide of DNA demethylase, as depicted in Fig. 15, is not described in detail, the Applicants submit that the antisense oligonucleotide is described in the specification on page 43, lines 5 to 17, as the antisense orientation of the human dMTase1 cDNA. One skilled in the art would easily understand what is meant by this description and as such the Applicants believe that this description is sufficient to give the identifying characteristics of the antisense oligonucleotide of DNA demethylase.

Claim 33 has been amended to be directed to double stranded C^mG oligonucleotide. Support for this amendment can be found on page 7 lines 31-32 of the specification.

The amendment to claim 35, as discussed above, is believed to overcome the Examiner's rejection to claim 35 under 35 U.S.C. § 112, first paragraph.

Claims 37 and 38 have been cancelled.

The amendments to the claims 32, 33 and 35 and the arguments presented above are believed to overcome the Examiner's rejections to claims 32 to 38 under 35 U.S.C. § 112, first paragraph for failing to comply with the written description requirement. Claim 34, dependent on claim 33, and claim 36, dependent on claim 32 are also therefore believed to overcome the Examiner's rejections under 35 U.S.C. § 112, first paragraph for failing to comply with the written description requirement.

With respect to the rejection to claims 32 to 38 under 35 U.S.C. § 112, first paragraph as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention, reconsideration by the Examiner is respectfully requested on the following grounds.

As discussed above, claim 32 has been amended to be directed to a method of inhibition of tumorigenesis and for altering a methylation pattern in a patient DNA. Support for this amendment can be found on page 10, lines 19-23, Fig. 14C, Fig. 15 and page 32, line 26 to page 33, line 5 of the specification. In addition, claims 37 and 38 have been cancelled. The Applicants submit, therefore, that one skilled in the art would be able to make and/or use the invention.

The amendments to the claims and the arguments presented above are believed to overcome the Examiner's rejections to claims 32 to 38 under 35 U.S.C. § 112, first paragraph

for lack of enablement. Claims 33, 35 and 36, dependent on claim 32, and claim 34, dependent on claim 33, are also therefore believed to overcome the Examiner's rejections under 35 U.S.C. § 112, first paragraph for lack of enablement.

In addition, new claims 39 and 40, directed to methods of measuring demethylase activity have been added. Support for new claims 39 and 40 can be found throughout the specification, for example on page 24, lines 8-10.

The Applicants submit that no new matter has been added by the present amendments.

It is submitted, therefore, that the claims are in condition for allowance. Reconsideration of the Examiner's rejections is respectfully requested. Allowance of claims 32-36 and 39-40 at an early date is solicited.

In the event that there are any questions concerning this amendment or the application in general, the Examiner is respectfully urged to telephone the undersigned so that prosecution of this application may be expedited.

Although a Petition for an Extension of Time is submitted herewith, if necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket No. 038630.48896).

Respectfully submitted,

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APPENDIX

REPLACEMENT SHEETS FOR DRAWINGS 1-50 FOLLOW